

Claims

1. A laboratory tempering device for jointly tempering reaction samples in at least two steps in assigned, specified temperature ranges, which are repeatedly carried out consecutively as sequences of steps, the laboratory tempering device, in a randomly selected first step of the sequence bringing several first groups of samples, in each case containing at least one sample, to temperatures, which are the same within the group and different between the groups within the first temperature range assigned to the first step, wherein, in a randomly selected step of the sequence, if the reaction product is affected by the two steps with regard to identical evaluation parameters, for at least one of the first groups at least two of the samples belong to different groups, which are brought to temperatures, which are the same within the groups and different between the groups, within the temperature range assigned to the second step, and, if the evaluation parameters are different, at least two random samples belong to different third groups, which are brought to temperatures, which are the same within groups and different between groups, within the second temperature range assigned to the second step.

2. Laboratory tempering devices of claim 1, wherein, in the case of two steps with different evaluation parameters, all samples of a third group are contained in a first group or all samples of a first group are contained in a third group.

3. The laboratory tempering devices of claim 1, wherein, in the case of two steps with identical evaluation parameters, all samples of all second groups belong to different first groups.

4. The laboratory tempering devices of claim 1, wherein, in the case of all steps of the sequence, the samples are brought groupwise to different temperatures in the assigned temperature range.

5. The laboratory tempering devices of claim 1, wherein only one of the first and/or second and/or third groups contains several samples.

6. The laboratory tempering devices of claim 5, wherein groups, which contain several samples, contain those of other groups which, in their assigned temperature range, are in the vicinity of the middle temperature.

7. The laboratory tempering devices of claim 1, wherein the samples are disposed in an array of rows and columns.

8. The laboratory tempering devices of claim 7, wherein the rows and columns are disposed orthogonally to one another.

9. The laboratory tempering devices of claim 7, wherein all samples of a group are in a row or in a column.

10. The laboratory tempering devices of claim 7, wherein the third groups form partial regions of the array, which enclose, with their regional boundaries, only samples of the same third group.

11. A laboratory tempering device for jointly tempering reaction samples in at least three steps in assigned, specified temperature ranges, which are repeatedly carried out consecutively as sequences of steps, the laboratory tempering

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device, in a randomly selected first step of the sequence bringing several first groups of samples, in each case containing at least one sample, temperatures, which are the same within the group and to different temperatures between the groups within the first temperature range assigned to the first step, and, in a randomly selected second step of the sequence, in the case of at least one of the first groups, at least two samples in each case belong to different second groups, which are brought to temperatures, which are the same within groups and different between groups, of the second temperature range assigned to the second step, wherein in a randomly selected third step of the sequence, in the case of at least one of the first groups and at least one of the second groups, at least two samples belong to different third groups, which are brought to temperatures, which are the same within the groups and different between the groups, within the third temperature range assigned to the third step.

12. The laboratory tempering device of claim 11, wherein the reaction samples are disposed three-dimensionally and temperature gradients are applied in the X, Y and Z directions for producing the different temperatures for three steps.

13. The laboratory tempering device of claim 11, wherein the reaction samples are disposed in a surface.

14. The laboratory tempering device of claim 13, wherein, in the first step, the surface is divided with a first center line into two first partial areas, in which, in each case, identical temperature gradients are applied in opposite directions

perpendicularly to the center line, and wherein, in the second step, the surface is divided with a second center line, which is perpendicular to the first center line, into two second partial areas, in which, in each case, identical temperature gradients are applied in opposite directions perpendicularly to the center line, and wherein, in the first step, different temperatures are applied in the four quadrants of the surface, which are formed by the two center lines.

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